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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,705	10/05/2006	Yukihiko Minamida	09852/0205611-US0	3025
7278	7590	10/17/2007	EXAMINER	
DARBY & DARBY P.C.			MATOCHIK, THOMAS L	
P.O. BOX 770			ART UNIT	
Church Street Station			PAPER NUMBER	
New York, NY 10008-0770			4134	
			MAIL DATE	DELIVERY MODE
			10/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,705

Applicant(s)

MINAMIDA ET AL.

Examiner

Thomas Matochik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/5/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Rejections - 35 USC § 102***

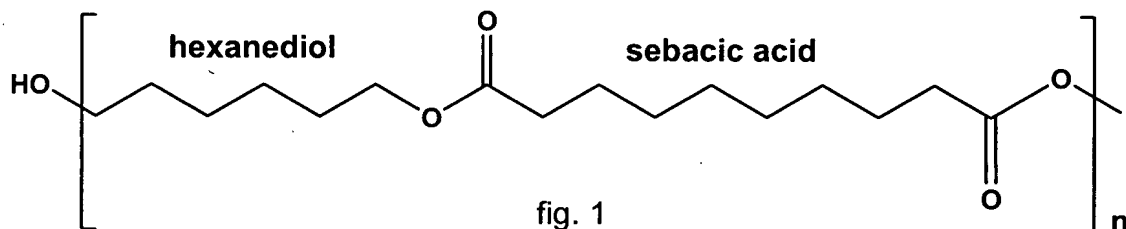
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 6-10 are rejected under 35 U.S.C. 102(b) as being unpatentable over Li et.al (US 6,221,978) when taken with DYNACOLL® polyester data from Degussa®.

Regarding claim 1: Li teaches a moisture curable, hot melt, polyurethane adhesive formed by a reaction between a polyisocyanate and polyols (col. 6, lines 14-16). Further, Li teaches the polyols to be: (A) – an aliphatic polyester polyol shown in fig. 1, (B) – an aliphatic polyether polyol having a molecular weight between 1,000 to 4,000 (col. 4, lines 65-67 and col. 5 line 1) and (C) – an amorphous polyester polyol with the trade name DYNACOLL 7100® series having glass transition temperatures above 0°C (col. 5, lines 16-27). Li does not teach the molecular weights and glass transition temperatures. However, polyester data shows the claimed T_g and molecular weight for the DYNACOLL 7100® series (See Degussa polyester data, page 4).



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Li teaches the aliphatic polyester polyol (A) shown in fig. 1 (col. 3, lines 15 and 28). The total carbon atoms in the aliphatic portions totals 14. Further, the molecular weight range specified is between 60 and 1400 (col. 4, line 5). Using a molecular weight of 1400, the value of n is approximately 5.

Regarding claim 2: Li teaches an additional aromatic polyester polyol (CII) incorporated into the polyurethane designated a "crystalline" polyol having a molecular weight of 3500 (col. 7, lines 17-20) and a glass transition temperature of 0°C (col. 4, lines 23 and 24).

Regarding claim 3: Li teaches the aliphatic polyether polyol (B) of the composition is polypropylene glycol having a molecular weight of 3,000 (col. 7, lines 8 and 9).

Regarding claim 6: Li teaches the composition of the polyurethane is as follows: the aliphatic polyester polyol (A) is between 10 and 90 parts (col. 3, line 45), the aliphatic polyether (B) is between 5 and 45 parts (col. 5, line 13) and the aromatic polyester polyol (CI) is between 5 and 35 parts (col. 5, line 31) all based on 100 parts of the polyurethane.

Regarding claim 7: Li teaches the composition of the aromatic polyester polyol (CI) is between 5 and 35 parts (col. 5, line 31) and the additional aromatic polyester polyol (CII) is between 10 and 60 parts (col. 4, line 53) all based on 100 parts of the polyurethane. Therefore sums of (CI) and (CII) will be between 10 and 35 parts per 100 parts of the composition. (i.e. 15 parts of (CI) and 15 parts of (CII) = 30 parts)

Regarding claim 8: An "island like phase separated structure" would be inherent to the composition as claimed. The office recognizes that all of the claimed effects and

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physical properties are not positively stated by the reference. Note however, that the reference teaches all of the claimed ingredients, process steps and process conditions and thus, the claimed effects and physical properties would implicitly be achieved by carrying out the disclosed process. If it is the applicants position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the examiner's position that the application contains inadequate disclosure in that there is no teaching as to how to obtain the claimed properties and effects by carrying out only these steps.

Regarding claim 9: Li teaches the viscosity range of the compositions @ 121°C is between 7,000 and 10,000 cps (Table II).

Regarding claim 10: Li teaches bonding a sheet or strip of the polyurethane composition to a substrate (col. 7, lines 27-33)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US 6,221,978) when taken with DYNACOLL® polyester data from Degussa® as applied to claims 1-3 and 6-9 above, and further in view of Critchfield et.al (US 4,312,973).

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Li teaches the composition as set forth in claims 1-3 and 6-10 above

Regarding claims 4 and 5: Li does not teach the endcapping of polypropylene glycol (B) with ethylene oxide. However, Critchfield teaches the incorporation of ethylene oxide into polypropylene polyols (col. 1, lines 46-49). Li and Critchfield are analogous art since they both are from the same field of endeavor, namely polyurethane elastomer synthesis. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate ethylene oxide as taught by Critchfield, in the composition of Li, in order to optimize the reactivity of the polyol.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Matochik whose telephone number is 571-270-3291. The examiner can normally be reached on Monday-Friday 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TLM
10/11/2007



MARK EASHOO, PH.D.
SUPERVISORY PATENT EXAMINER

15/Oct/07